



# HEAVY DUTY BRAKE FLUID

## MSDS042

### SECTION 1: IDENTIFICATION

MSDS ID: MSDS042

PRODUCT NAME: PRESTONE Heavy Duty Brake Fluid  
AS400, AS401, AS402, AS402-6, AS403, AS405, AS455  
Formula: 436, 2075-28, 2075-36

MANUFACTURER: Prestone Products Corporation  
39 Old Ridgebury Road  
Danbury, CT 06810-5109

INFORMATION PHONE NUMBER: (203) 830-7800

EMERGENCY PHONE NUMBER: CHEMTREC 1-800-424-9300  
483-7161 in the District of Columbia

MSDS DATE OF PREPARATION/REVISION: 08/06/02

### SECTION 2: PRODUCT COMPONENTS

HAZARDOUS COMPONENTS	CAS#	PERCENT	EXPOSURE LIMITS
Proprietary mixture of glycol ethers, polyglycols, glycols, oxidations inhibitors and corrosion inhibitors	Mixture	95-100	None Established PEL None Established ACGIH TLV

Diethylene Glycol	111-46-6	<20%	10 mg/m3 TWA AIHA WEEL
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Triethylene Glycol	112-27-6	<10%	100 mg/m3 TWA Manufacturer
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### SECTION 3: HAZARDS IDENTIFICATION

#### EMERGENCY OVERVIEW

Clear amber liquid with a mild odor. Eye contact may cause irritation with possible corneal injury. May cause mild skin irritation or sensitization. Breathing high concentrations of vapors or mists may cause irritation, headache, dizziness, drowsiness, nausea, loss of sense of balance and visual disturbances. Swallowing may cause gastrointestinal disturbances including irritation, abdominal pain, back pain, nausea, vomiting, diarrhea, headache, dizziness, drowsiness, nausea, visual disturbances, decreased urine production, malaise, unconsciousness and liver or kidney damage. May cause chronic effects.

#### POTENTIAL HEALTH EFFECTS:

##### ACUTE HAZARDS:

INHALATION: None expected from short term exposures at ambient temperatures. At elevated temperatures, product may cause respiratory irritation, headache, dizziness, drowsiness, nausea, loss of sense of

balance and visual disturbances. High concentrations of vapors at ambient temperatures may cause lung injury or liver dysfunction.

**SKIN CONTACT:** Prolonged or repeated exposure may cause mild irritation with redness and discomfort. Prolonged contact may cause defatting or drying of the skin.

**DERMAL TOXICITY:** Prolonged or widespread contact may result in the absorption of potentially harmful amounts resulting in effects similar to those listed under ingestion.

**EYE CONTACT:** May cause irritation with tearing, blurred vision and possible corneal damage.

**INGESTION:** Ingestion may cause abdominal pain, back pain, nausea, vomiting, diarrhea, headache, dizziness, drowsiness, nausea, visual disturbances, decreased urine production, malaise, unconsciousness and liver or kidney damage.

**CHRONIC HAZARDS:** Prolonged or repeated skin contact with this product may possibly lead to irritation and dermatitis. Prolonged or repeated exposures may cause damage to the central nervous system, lung, liver or kidneys. Adverse reproductive effects may also occur.

**MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:** May aggravate pre-existing skin, lung, liver and kidney disorders.

**CARCINOGEN:** None of the components is listed as a carcinogen or potential carcinogen by IARC, NTP or OSHA.

## SECTION 4: FIRST AID MEASURES

**INHALATION:** Remove to fresh air if effects occur and seek medical attention.

**SKIN CONTACT:** Remove contaminated clothing. Wash all affected and exposed areas with soap and water. If skin irritation or redness develops or persists, seek medical attention.

**EYE CONTACT:** Exposed eyes should be immediately flushed with copious amounts of water using a steady stream for a minimum of 15 minutes. If irritation, pain, swelling or tearing develop, seek medical attention.

**INGESTION:** If swallowed, get immediate medical advice by calling a Poison Control Center or hospital emergency room. If advice is not available, take victim and product container to the nearest emergency treatment center or hospital. Do not attempt to give anything by mouth to an unconscious person.

**NOTES TO PHYSICIAN:** It is estimated that the lethal oral dose of diethylene glycol in adults is 1.0-1.2 ml/kg. Diethylene glycol may cause an elevated anion-gap metabolic acidosis and renal tubular injury. Liver injury may occur, but not as severe as kidney injury.

The signs and symptoms in diethylene glycol poisoning are those of metabolic acidosis, CNS depression and kidney injury. Urinalysis may show albuminuria, hematuria and oxaluria. The current medical management of diethylene glycol poisoning includes elimination of diethylene glycol, correction of metabolic acidosis and prevention of kidney injury. It is essential to have immediate and follow-up urinalysis and clinical chemistry. There should be particular emphasis on acid-base balance, and liver and kidney function tests. For severe and/or deteriorating cases, hemodialysis may be required. Dialysis should be considered for patients have severe metabolic acidosis, or compromise of renal function. There is no conclusive evidence that ethanol treatment will be beneficial. Consult your poison control center.

### **SECTION 5: FIRE AND EXPLOSION DATA**

FLASH POINT: Greater than 250 F (>121 C) PMCC

AUTOIGNITION TEMPERATURE: Not determined

FLAMMABILITY LIMITS: LEL: Not determined UEL: Not determined

EXTINGUISHING MEDIA: Use water spray or fog, foam, carbon dioxide or dry chemical. Cool fire exposed containers with water. A direct stream of water or foam may cause frothing.

SPECIAL FIRE FIGHTING PROCEDURES: Firefighters should wear positive pressure self-contained breathing apparatus and full protective clothing for fires in areas where chemicals are used or stored.

UNUSUAL FIRE HAZARDS: None

HAZARDOUS COMBUSTION PRODUCTS: Burning may produce carbon monoxide, carbon dioxide, and nitrogen oxides.

### **SECTION 6: ACCIDENTAL RELEASE MEASURES**

Wear appropriate protective clothing and equipment (See Section 8). Collect material with absorbent material and place in appropriate, labeled container for disposal.

### **SECTION 7: HANDLING AND STORAGE**

Avoid eye contact.  
Avoid prolonged skin contact.  
Avoid breathing vapors and mists.  
Use with adequate ventilation.  
Wash exposed skin thoroughly with soap and water after use.  
Keep away from excessive heat and open flames.  
Do not add nitrites or other nitrosating agents. Nitrosamine, which

may cause cancer, may be formed.  
Keep containers closed when not in use.  
Store in a cool, dry area.  
Sudden release of hot organic chemical vapors or mists from process equipment operating at elevated temperature and pressure, or sudden ingress of air into vacuum equipment, may result in ignitions without any obvious ignition sources.  
Empty containers retain product residue and may be hazardous. Do not cut, weld, drill, etc. containers, even empty. Do not reuse empty containers unless properly cleaned.

### **SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

**VENTILATION:** General ventilation should be adequate for normal use. For operations where the product is heated or misted and exposures may be excessive, mechanical ventilation such as local exhaust may be needed to minimize exposure.

**RESPIRATORY PROTECTION:** None under normal use conditions. For operations where exposures may be excessive, a NIOSH/MSHA approved respirator with an organic vapor cartridge and a dust/mist prefilter or supplied air respirator is recommended. Equipment selection depends on contaminant type and concentration. Select in accordance with 29 CFR 1910.134 and good industrial hygiene practice. For firefighting, use self-contained breathing apparatus.

**GLOVES:** Chemical resistant gloves such as PVC coated gloves are recommended to prevent prolonged/repeated skin contact.

**EYE PROTECTION:** Splash proof goggles are recommended to prevent eye contact.

**OTHER PROTECTIVE EQUIPMENT/CLOTHING:** Protective clothing if needed to avoid prolonged/repeated skin contact. Suitable washing and eye flushing facilities should be available in the work area. Contaminated clothing should be removed and laundered or dry cleaned before re-use.

### **SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

**APPEARANCE AND ODOR:** Clear amber or yellow liquid, mild odor.

pH: Not determined	SPECIFIC GRAVITY: 1.02 - 1.05
BOILING POINT (F): > 450 F	VAPOR PRESSURE: Less than 0.01 mmHg @ 20 C
FREEZING POINT (F): <-60 F	VAPOR DENSITY: >1
SOLUBILITY IN WATER: 100%	EVAPORATION RATE: Not determined
PERCENT VOLATILE: 100%	VISCOSITY: Not determined

### **SECTION 10: STABILITY AND REACTIVITY**

**STABILITY:** Stable

**CONDITIONS TO AVOID:** Contact with nitrites or other nitrosating

agents may produce nitrosamine, a known animal carcinogen.  
INCOMPATIBILITY: Strong oxidizing agents, acids, strong alkalies and peroxides.

HAZARDOUS DECOMPOSITION PRODUCTS: Combustion will product carbon monoxide, carbon dioxide and nitrogen oxides.

HAZARDOUS POLYMERIZATION: Will not occur

### SECTION 11: TOXICOLOGICAL INFORMATION

Diethylene Glycol: Oral rat LD50: 12565 mg/kg  
Skin rabbit LD50: 11890 mg/kg  
Triethylene Glycol: Oral rat LD50: 17 gm/kg  
Skin rabbit LD50: >20 mL/kg

### SECTION 12: ECOLOGICAL INFORMATION

No ecotoxicity data is available for this product.

### SECTION 13: DISPOSAL INFORMATION

Recycle, incinerate, treat or landfill in accordance with all local, state/provincial and federal regulations.

### SECTION 14: TRANSPORT INFORMATION

U.S. DOT HAZARD CLASSIFICATION

PROPER SHIPPING NAME: Not regulated

TECHNICAL NAME: N/A

UN NUMBER: N/A

HAZARD CLASS/PACKING GROUP: N/A

LABELS REQUIRED: N/A

DOT MARINE POLLUTANTS: This product does not contain Marine Pollutants as defined in 49 CFR 171.8.

IMDG CODE SHIPPING CLASSIFICATION

DESCRIPTION: Not Regulated

ID NUMBER: N/A

HAZARD CLASS: N/A

PACKING GROUP: N/A

LABELS REQUIRED: N/A

PLACARDS REQUIRED: N/A

### SECTION 15: REGULATORY INFORMATION

EPA SARA 311/312 HAZARD CLASSIFICATION: Not applicable

EPA SARA 313: This Product Contains the Following Chemicals  
Subject to Annual Release Reporting Requirements Under SARA Title  
III, Section 313 (40 CFR 372):

Chemical Name	CAS#	Weight%
Glycol Ethers	NA	<100

PROTECTION OF STRATOSPHERIC OZONE: This product is not known to contain or to have been manufactured with ozone depleting substances as defined in 40 CFR Part 82, Appendix A to Subpart A.

CERCLA SECTION 103: This product is not subject to CERCLA reporting requirements, however, many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.

CALIFORNIA PROPOSITION 65 - This product does not contain chemicals regulated under California Proposition 65.

EPA TSCA INVENTORY: All of the components of this material are listed on the Toxic Substances Control Act (TSCA) Chemical Substances Inventory.

CANADIAN ENVIRONMENTAL PROTECTION ACT: All of the ingredients are listed on the Canadian Domestic Substances List.

CANADIAN WHMIS CLASSIFICATION: Class D - Division 2 - Subdivision B - (Toxic material causing other chronic effects)

EUROPEAN INVENTORY OF EXISTING COMMERCIAL CHEMICAL SUBSTANCES (EINECS): All of the ingredients are listed on the EINECS inventory.

## SECTION 16: OTHER INFORMATION

NFPA RATING (NFPA 704) - FIRE: 1  
HEALTH: 2  
REACTIVITY: 0

REVISION SUMMARY: Revised Header  
Section 1: Removed P from MSDS Number  
Changed Contact Name and Phone Number

This MSDS is directed to professional users and bulk handlers of the product. Consumer products are labeled in accordance with Federal Hazardous Substances Act regulations.

While Prestone Products Corporation believes that the data contained herein are factual and the opinions expressed are those of qualified experts regarding the results of tests conducted, the data are not to be taken as a warranty or representation for which Prestone Products Corporation assumes legal responsibility. They are offered for your consideration, investigation and verification. Any use of these data



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and information must be determined by the user to be in accordance with applicable federal, state and local laws and regulations.

If more information is needed, please contact:

Technical Service

Prestone Products Corporation

55 Federal Road

Danbury, CT 06810

(800)-862-7737